An

Essay

On

Read March 7. 1829

Accidental Uterine Haemorrhage

By Allison Ely Perrine

Of

New-Jersey

Philadelphia

1829

An

Inaugural Dissertation

For

The Degree of

Doctor of Medicine

Submitted
To the examination
of
the
Trustees and Medical Professors
of the
University of Pennsylvania
on

The 1st. day of January
1829.

To Dr Gilbert S Woolhull.

Dear Sir,

Conscious of the many acts of kindness I have received from You, since I first entered as a medical Student the portals of your office; and cherishing a sense of gratitude for such generous acts: I gladly embrace this opportunity of expressing my thanks to you, for the kindness, and attention, you heretofore have shown me.

May your life be prolonged to an age replete with honour, as it now is with admiration, is the sincere wish of your much obliged, and highly favoured pupil.

Allison E Perrine.

To Dr William P Dewees.

Dear Sir.

Short as has been the time, since I have had the advantage of your private instruction, yet to you am I indebted for many a valuable suggestion, both in public and in private; and of you have I imbibed a taste for that branch of medical science, that has so long found in you a second Baudelocque. In consideration of such advantages, permit me thus publicly to declare my thanks and satisfaction.

May your life, so valuable to the afflicted, be long spent in the cause of suffering humanity, and in the promulgation of useful knowledge. And may your labours entitle you to a name, that shall rank with a Haller and a Hunter

Allison & Perrine.

Uterine Hamorrhage.

As the term Uterine Hamorrhage signifies a discharge of pure blood from the internal face of the uterus, occurring at any period of female existence; it follows that the discharge improperly called "Menorrhagia," and still more improperly considered as an "immoderate flow of the menses," should be considered under the same term, and treated of in this dissertation. But all discharges from the unimpregnated uterus, are of little moment when compared with that tremendous, and overwhelming torrent, that threatens the pregnant female with the inevitable destruction of her own, or that of her infants life; or if she escape it will be but with a health, that shall soon bring upon her all the horrors that attend phthisis, or the devastations of general dropsy. A case of ascites from this cause occurred in the Alms

House during the present summer and was successfully managed by the indefatigable efforts of Dr. Jackson.* It is this hæmorrhage that has engaged the attention of the most learned of Europe and America, whose names do honour to the country which gave them birth; it is this that opens to the inquisitive, vast fields for speculation, and deep mysteries for investigation; and it is this too of which the celebrated Denmant† has declared that "though much industry hath been employed upon it, there is reason to believe that the knowledge of many things of which we are at present ignorant, is wanting for the perfection of the rules of practice". Though I do not expect to advance any thing new in my investigations of this disease; yet I hope to succeed in giving a clear and concise account of its nature, causes, and treatment, and in interesting my candid reader with a few immature, and ill-digested ideas,

*For cases of this nature vide Van Sweitens Commentaries Sect. 1303
† vide Introd. to Mich. Francis' ed. p. 464

if I succeed ita fiat, if I fail it must be remembered, that it will only be adding one failure to the many from the days of Hippocrates to the present moment. The importance of Uterine Hæmorrhage, which from its extent, and impetuosity has been termed a flooding, is acknowledged by many, and its fatality, if left to nature, is admitted by all. It has been asserted by writers, that, as this hæmorrhage arose from two different causes, it became necessary to distinguish them by the names Accidental, and Unavoidable. The propriety of this division is too evident to need any comment; but I conceive that this disease has more causes than two only for its production, and hence, for greater minuteness and accuracy of description, I shall subdivide Accidental into Concealed, and Apparent, to which alone I shall direct my attention; and first of

Concealed Uterine Hæmorrhage.

This is no artificial and ill-founded division, it is not the product of a youthful mind, but it is the arrangement of the great Baudelocque, and not of my own fabrication. The danger of an internal hæmorrhage is too evident, and its difficulties too often felt by the experienced, to pass it by unnoticed; all practical writers warn us against internal flooding, nay, some carry it to interference, to ascertain the diagnosis, among whom are Drs Johnson * and Leake.† The causes of this hæmorrhage are various, and each requires a separate consideration: 1st. Rupture of the vessels of the umbilical cord; 2d. a separation of a portion of the placenta, by the adherent edges of which the blood is confined; 3d. a closure of the os uteri, by which the blood effused into the cavity of the uterus from any source is concealed. Though a hæmorrhage

* vide Syst. of Mid. p. 157
† vide Diseases of Women vol 2 p. 280

rarely proceeds from the umbilical vessels, yet it demands a slight consideration; for La Motte,* M. Levret,† and Baudelocque,‡ from the testimony of their own senses bare witness to its occurrence. Hence it appears that Dr Rigby's# declaration is only calculated to lull into a false security, for he declares "that as it perhaps may never occur again, I think it deserves not to be considered among the general causes of the uterine hæmorrhage." Without any remark of my own, I shall only appeal for its refutation to the assertion of my venerable Preceptor "it is fortunately" says he‡ "but of rare occurrence, but its management on that account should be the better defined." Again, it would appear that Dr Rigby is equally incorrect; when he says## "that the separation of the placenta from the uterus is the proximate cause of every considerable discharge of blood from the womb." yet it is truly of rare

* vide Van Swieten's Commentaries Sect 1304
† vide Denmes' Baudelocque p. 272
‡ vide Denmes' Baudelocque p. 272
# vide Rigby on Uterine Hæmorrhage p. 15
‡ vide Denmes Mid. p 464
vide Rigby on Uterine Hæmor. p. 7

occurence, for though the cord may be so short as six inches, or so long as forty eight, and twisted seven times around the child's neck, as Baudelocque has seen* and though the umbilical cord may be varicose, which is always perhaps the case, when hæmorrhage proceeds from this cause, yet the economy of the Uterus and liquor amnii is against it; for if the latter be evacuated, the contractions of the muscular fibres of the uterus causes it to grasp the fœtus, so as to render it immovable; and if the waters are retained, their specific gravity is so nearly in equilibrio, with that of the child that neither will preponderate. Notwithstanding, this does sometimes take place, but in such cases it must be evident, that the blood is extravasated in the cavity of the membranes and thus eludes the most careful examination, until symptoms of a most

* vide Denmans Baudelocque p. 153

alarming nature ensue, such as dull deep seated pain, a sensation of weight in the part, distention of the abdomen, sometimes to an enormous degree, and faintness. the countenance appears ghastly, and expressive of the greatest anxiety, the extremities become cold, laborious breathing, frequent sighing; and if not speedily relieved expires in convulsive agonies. Our only resource in this case is delivery semel et simul; for on this alone depends the safety of our patient. As regards the second, and third causes of concealment, little need be said in addition to what has been premised; the occurrence of the former is very common, for it is but reasonable to suppose, that when a portion of the placenta near its centre is detached from the uterus, whilst its edges remain in statu quo that there will be a hidden flow of blood, though not to a very great extent, unthout the edges are

broken loose, and become an apparent hæmorrhage, or extravasated into the uterus, and there confined by a closure of the os uteri either naturally, spasmodically, or by an interposition of a foreign body as a coagulum, placenta, tampon &c, when it would rank under the third cause of concealment. Almost all writers on Midwifery detail cases of internal flooding, from both of these last conditions; thus, Baudelocque * relates several, the case of Madame de — was of the first condition. Dr Dewees details a similar case,† the latter writer # gives us a case also of internal hæmorrhage owing to the third condition which terminated fatally. Considering the multiplicity of lymphatics that meander throughout the substance of the uterus, it appears a curious fact that the blood extravasated behind the placenta is not absorbed however long it remains, but is found blackish

* vide Dewees' Baudelocque p 275
† vide Dewees' Baudelocque p. 271
# vide Dewees' Midwifery p 474

solid, and dried, as was the condition of all the cases handed down to us by Baudelocque; this proves what Dr Denman * long ago declared that the particles of a putrified placenta are not absorbed into the constitution, and become the cause of dangerous diseases, as has been asserted by many; but rather that the putridity of the placenta is the consequence, and not the cause of the disease, which is more generally owing to the rashness, or violence of the ignorant, in proof of this point, the Doctor + tells us that he once knew a placenta to remain fifteen days with little signs of putrefaction. Whoever pays a proper attention to concealed Uterine Hamorrhage, will not only admit the propriety of the division, and the danger of negligence; but will be led to form his prognosis of every hamorrhage, more from its effects on the system, than from the quantity of blood effused, for on this depends the time when, we are to execute what

* vide Denmans Mid. p. 472
+ vide Denmans mid. p. 501

reason dictates, or experience authorises. The symptoms having been premised, and the treatment being about to follow in another place, I shall proceed to a more important, and diversified order of accidental uterine hæmorrhage.

Apparent Uterine Hæmorrhage.

Here we again launch into a labyrinth of greater difficulties, than that from which we have just escaped. But happily for suffering humanity, that the curious delight on such to dwell, for whilst some from its simplicity of treatment disregard it, others from sad experience venture to remind the adept, and teach the novice its great importance. Whoever views with an anatomical eye the connection of the ovum with the uterus, and considers the facility of its separation by causes always threatening the expulsion of the Uterine contents, must cease to wonder at its frequency, and the danger of its occurrence.

Though the ovum until the fifth month of gestation, is intimately connected with the whole internal face of the uterus, by the interlocking of the vessels of the chorion with those of the decidua; yet the separation of these vessels, which are smaller, more convoluted, and consequently commanding less blood, is not attended with so much danger from hæmorrhage, as in a more advanced period of pregnancy, when the connection though smaller, is formed by larger vessels conveying a much greater quantity of blood. Therefore the danger of flooding increases, whilst its frequency diminishes, as gestation advances. Numerous causes of this hæmorrhage have been assigned by writers: as, 1st- too short a funis, whose agency if not nugatory is certainly doubtful; 2d, mechanical violence; 3d, passions or emotions of the mind; 4th, plethora. These have all been laid down as causes of this

disease before delivery, and cases detailed in support of their efficacy; thus the second caused the death of the sister of Mauriceau*, the third that of the Spartan mother,+ and the fourth is supposed to have slain thousands; to these are added many others as stimulants, emmenagogues, abortiva, and every thing that will increase the action of the heart and arteries. These are considered the exciting causes, whilst the predisposing it is stated # is to be sought for either in an increased quantity of blood circulating towards the uterine vessels, or some malformation of the vessels which connect the placenta to the uterus. But it seems more rational to say that the contraction of the uterus is the exciting cause, that the tendency to contraction is the predisposing, and that the remote causes enumerated above are merely contingent, or accidental in their modus

* vide van Swieten's com. sect 1306
+ vide van Swieten's com. sect 1306

operandi, for they only produce an increased flow of blood into the uterine parietes, which becoming the source of distention and irritation, stimulates the muscular fibers to contraction by which the ovum is separated from the uterus and hæmorrhage follows. The causes of flooding after delivery are: 1st, atony; 2d, spasm; 3d, humoral engorgement; 4th, unequal contraction of the uterus; 5th, inversion. There yet remains one cause of this disease, whose action is unavoidable, and whose presence declares danger to the possessor, and vexation to the accoucheur. Pallude to the implantation of the placenta over the mouth of the uterus, giving rise to one of the most inveterate and dangerous diseases, if neglected, that rank on the long list of human infirmities. In prosecuting our inquiries in the treatment of this disease, it appears proper that it should be arranged into four

divisions; 1st. into all that period between conception and the fifth month of Utero-gestation; 2d. into all the remaining period of Utero-gestation; 3d. into that period between the birth of the child and the expulsion of the placenta; 4th. into that which may follow the expulsion of the placenta.

First Period.

Until, near the period of the fifth month of utero-gestation, the ovum is entirely surrounded by the walls of the uterus, so that the attachment of one to the other, exists in every point of surface, and from any part of which, when the connecting medium is distroyed, a hæmorrhage may ensue. It would be curious, and indeed interesting to the physiologist to ascertain the reason why women are more liable to abortion than animals; and why those females who are blessed with the happiness of the more luxurious scenes of life, are more

obnoxious to it than those unhappy persons,
whose destiny is servile, and whose station in
life is rude and rustic. But here all specula-
tion ceases, and it is no more than possible that
it should ever remain shrouded in obscurity
and buried in the deep arcana of nature. In
the commencement of this disease, when the
bleeding is inconsiderable, the woman robust,
the pulse full, and pain not acute, she com-
plains not, her usual occupation enlists her
attention, and in spite of every injunction, she for-
gets the past, and disregards the future, until the
haemorrhage is repeated again and again; increas-
ing gradually, or flowing in a torrent; until the
contents of the uterus are discharged. The Progno-
sis of abortion is involved in great difficulties,
of which the experienced have often complained,
for it will sometimes take place when we least
expect it, or recovery happen when all our

hopes had been abandoned. But in general, when there is considerable pain, when the cervix uteri surrenders to the efforts of the body and fundus; the abdominal tumour diminishes, when milk is secreted, and the mamma become flaccid, we may expect a miscarriage; but when these are absent the ovum may tarry yet longer. These symptoms are sufficient to justify us in abandoning all hopes of preventing abortion, and to cause us to direct our measures towards the flooding alone. Dr. Bard has declared* that, "when labour pains precede the discharge, miscarriage can seldom be prevented; when they follow, it sometimes may." Since it is so difficult to point out any precise prognostic mark liable to no exception, we should never fail to direct our practice, as though we expected to succeed. The indications in the treatment of this period, are, 1st. to arrest the bleeding; and 2d. prevent a recurrence of the haemorrhage. However slight the discharge may be, we

* vide Bards Mid. p. 138

should never- pass it by unheeded, for the sooner we arrest it the better; for the preservation of the ovum, or the safety of the woman. We should attempt to arrest the hæmorrhage by directing a horizontal position upon a mattress, or sacking- bottom, undisturbed by any exertions whatever, either on the part of the physician, or that of the nurse, hence medicines, drinks, or nourishment of any kind should be given in that position. We should not give any thing that would excite either vomiting, purging, or coughing, if they do occur they must be managed with great adroitness. Neither should the patient be disturbed for the adjustment of either her position, or the changing of her clothes. The next steps is to diminish the action of the heart and arteries, both generally and locally. And first, generally, by admitting cold air into the room, by drawing the curtains, and throwing the clothes of the bed; giving at the same time cold acidulated drinks, and food of the

same nature when demanded; and by forbidding all stimuli, either in a liquid or solid form. We next resort to venesection; the importance of this should never be lost sight off when circumstances demand its employment. Second, locally by cold applications; as cold vinegar, or spirits, either alone or diluted, to the pubic region; or simply a bladder filled with ice and water. Our fourth step is to subdue pain if it be present, by narcotics; of which opium stands foremost, in this valuable class of medicines, it should be given in large doses if much pain attends; and repeated until uterine contractions are subdued, or its powers appear incapable of the desired end. In the exhibition of opiates in Uterine haemorrhagies generally, our learned Professor of Midwifery observes,* (whose observations, indeed, should always be respected) that they should be combined with Ipecacuanha, in the proportion of half a grain of the latter to about two grains of opium; to be repeated

* vide James' Burns' Mid. note to p. 315 vol. 1st.

more or less frequently, according to the circumstances of the case. Our attention should now be turned to those remedies, that act immediately on the patulous mouths of the bleeding vessels; and those that dispose the blood to a more speedy coagulation. Of the first is sugar of lead, in the dose of two or three grains, guarded with half a grain of opium, more or less of each as existing symptoms may demand; if the stomach be irritable, we may exhibit a solution of 20 or 30 grains in a gill of water, with a drachm of laudanum, per annum; even should the stomach not be irritable, it is a valuable mode of administering this important article, and we are much indebted to him, who so strenuously inculcates its utility. Of the second the tampon stands alone, as well in simplicity as in importance: It is only necessary to take a piece of fine sponge imbued with acetic acid, and introduce it into the vagina, to arrest the most violent

flooding, and snatch a suffering female from im-
pending ruin. But previously to the introduction
of the sponge, we should examine the state of the
neck of the uterus and os tincæ; but frequent
and unnecessary touching is certainly reprehensi-
ble, as it both fatigues the patient, and too often
removes the coagula that served to plug the bleed-
ing vessels. yet on this depends our prognosis. The
tampon, however, must be introduced, let the ap-
pearance of the cervix uteri be what it may, for
if the embryo cannot be preserved, the flooding
must be arrested, which the tampon is all suf-
ficient to accomplish. Nothing is more dangerous
than the opinion, that the ovum must be expel-
led, before the hæmorrhage can be arrested; this
is truely mischievous in its effects, and unfortunate
for those who put it in execution. It is true, a case
might possibly present itself in which the flooding
was very profuse, the pains very urgent, and

the os uteri well opened here we might be justified if we interfered; yet it should not be concealed, that even here we frequently add a greater to a leser evil. The embryo, it is true may be expeled by rupturing the membranes, but by this we gain nothing, for the secundines are often retained, and an alarming flooding is kept up, by their presence, and which can only be relieved, by their extraction. Should this mass be situated low we may possibly withdraw it by the fingers, yet this is seldom the case. If the hamorrhage be slight, and the Uterine contractions feeble, we may try a stimulating injection, or administer the ergot.

Second Period.

Should the woman have escaped abortion, and advanced thus far in her pregnancy, she may nevertheless be exposed to a hæmorrhage, during this period; a period which comprises all that time, from the commencement of the fifth

month, to the full completion of utero-gestation.
Should any part of the placenta be detached, by any of the remote causes, large vessels will now be ruptured or exposed, and flooding will ensue, proportionate to the advancement of the pregnancy; the extent of disunion; and the force of the circulation. Now the greater the advancement of pregnancy, the more unfavourable must be our prognosis; the more active our remedies; and the more strict our injunctions. The indications for the management of flooding during this period, are the same, as those for the first; and the remedies to be employed deffer but little; yet their exhibition must be more prompt and decisive, their doses larger, and their repetition more frequent. It now becomes a question, should all these remedies fail, and the haemorrhage continue, what next must be done? should we introduce the tampon, or proceed to deliver?

Leroux is an advocate for one, and Puzos the other. It is however the practice of the present day to give a faithful trial to the former, which, indeed, will generally succeed: Should it fail, however, we are warrantable in executing the latter. Before we proceed to delivery by turning, we should examine the state of the os uteri, if it be, neither dilated, or dilatable, the tampon is the sine qua non.

Third Period.

This period includes all that time, between the delivery of the child, and the expulsion of the placenta. Hæmorrhage can only happen, during this period, when a portion, or the whole of the placenta is separated from the uterus; and this separation can only be effected by uterine contractions, unless mechanical violence has been applied to the placenta, either, directly, or indirectly. We should not however mistake a discharge of blood, which almost always issues from the vagina, after the birth of

the child, for a hæmorrhage. Flooding cannot take place, so long as the adhesion of the placenta to the uterus is maintained, however great may be the atonic state of that viscus. Should this adhesion, however, be broken by any of the remote causes of uterine hæmorrhage, before delivery; improper management during its progress, or the natural efforts of the uterus after that operation: and should the spontaneous action of the uterus be insufficient for the expulsion of the placenta, we may expect a flooding in proportion to the extent of disunion, the inertia of the uterus, and the rapidity of the circulation. Though the placenta is generally expelled by the natural efforts of the uterus, after parturition; yet it sometimes happens, that it is retained, either; from 1st, insufficient action of the uterus; 2d. adhesion of the placenta; or, 3d. irregular action of the muscular fibres of the uterus. Each of these conditions requires some difference in its treatment.

should never be thought of. If a portion of the placenta be left behind, disagreeable consequences will sometimes follow, as fetor, thirst, and fever; to remove the former astringents and detergent liquors should be thrown into the uterus. What may give rise to an adherent placenta is difficult to determine; post mortem examinations refuse to disclose its mysteries, yet theory may supply their deficiencies. Should it be assured, it cannot incur danger to assert, that the adhesion is produced by a separation of a portion of the placenta from the uterus, during the early months of utero-gestation, when the vesels are small, and incapable of throwing out much blood, which produces a slight inflammation, extravasation of coagulating lymph, and union by the first intention. It very frequently happens from the over officiousness of the physician, or midwife,

that the uterus is found in the third condition.
Although the uterus is seldom subject to this irregular contraction, yet it does sometimes take place, and then we have a concealed hemorrhage, from a tonic contraction of the neck of the uterus, whilst the body and fundus are in a state of inertia. We should in this case commence with frictions on the abdomen, cold applications, saccharum saturni, secale cornutum, and brandy and water if indicated. Should these fail, a hand should be introduced within the os uteri, and remove the coagula; then grasp the placenta, rotating the hand against the parietes of the uterus, until contractions ensue, and then, and not till then, should the placenta be withdrawn.

Fourth Period.

Under this term, we include all discharges of blood, that may occur after the expulsion

of the placenta; and it may be either a continuation of that which existed before the expulsion of the placenta, or it may follow the exclusion of that mass. In either case if it is not produced, it is certainly kept up by inertia of the uterus. In general the hemorrhage takes place soon after delivery, but sometimes it occurs many hours afterwards, for even after the uterus has contracted, it may become atonic, again relax, and open the mouths of a thousand bleeding vessels. In any of these cases, our whole care should be directed towards preventing or removing inertia with all its dire effects, by producing the tonic contractions of the uterus; and the remedies heretofore enumerated are all sufficient to the accomplishment of the great desiderata.

Finis.